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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/821,474	03/30/2001	Monica K. Davis	64951-147/SP01-050	8851

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EXAMINER

DERRINGTON, JAMES H

ART UNIT	PAPER NUMBER
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1731

DATE MAILED: 11/26/2002

8

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/821,474

Applicant(s)

DAVIS ET AL.

Examiner

James Derrington

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 25 September 2002.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-24 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-24 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 6 . 6) ☐ Other: _____

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The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-5 and 7-12 are rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Matsummura et al (4,426,129).

Matsummura et al disclose the process of making a perform for fiber drawing comprising depositing successive layers of optical material inside a tube and then collapsing the successive layers in a reducing atmosphere comprising GeCl_4 (See Abstract, see examples and Col. 12, lines 14-16). The preform is then subjected to drawing procedures (Col. 12, lines 16-17). Applicant's definition of "positive pressure" can be 0 to 1.0 torr (claim 2), 0 to .5 torr (claim 3) or .2 to .4 torr (claim 4). Matsummura et al disclose vacuum pressures for collapsing the tube such as 9mm water or 27 mm of water at Col. 7, lines 8-12 and explains the effect of the level of vacuum (compare Fig 5a and 5B). Further at Col. 13, lines 61-65, a level of vacuum of 1 to 20 mm water is disclosed. A degree of vacuum of .5 cc (mm) of water at 4 °C converts to about .37 torr. Thus the range of 1 to 20 mm water as shown by Matsummura et al is inclusive of the range recited in claim 4. Further, Matsummura et

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al disclose a degree of vacuum of .20 mm Hg which converts to .2 torr as recited in claim 4 (Table, Col. 9). But in addition, one of ordinary skill in the art would be able to decide the level of vacuum needed to achieve collapsing of the layers in view of the teachings of Matsummura et al as discussed above. With regard to claims 7-8, Matsummura et al disclose both boron and Ge doping (See Col. 3, line 9 ff and examples).

Applicant's arguments have been reviewed; however, they are not persuasive for the following reasons. First, applicant has not pointed out support in the original disclosure that the recitation of "positive pressure" requires a pressure greater than ambient pressure. Even this definition proposed in the response is not clear because applicant has not stated that "ambient" refers to atmospheric pressure or some other pressure. It is submitted that the claims can be interpreted as presented in the rejection above. To reiterate, Applicant's definition of "positive pressure" can be 0 to 1.0 torr (claim 2), 0 to .5 torr (claim 3) or .2 to .4 torr (claim 4). The pressures values disclosed by Matsummura et al fall within these ranges.

Claims 1-5 and 7-12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Irven et al (4,165,224).

This is a new rejection. Irven et al disclose the process of making a perform for fiber drawing comprising depositing optical material inside a tube and then collapsing the successive layers in a reducing atmosphere comprising GeCl_4 (See Col. 4, line 14 ff). Successive layers of optical material would be inherently produced and it is clear that Irven envisions subjecting the perform to drawing procedures. Irven et al disclose

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that a small overpressure in the tube is maintained during collapsing of the tube whereby circular symmetry is preserved (Col. 3, lines 29-38). Irven et al defines overpressure in the tube as slightly greater than the outside pressure. (Col. 3, lines 33-34). Therefore the overpressure of Irven et al qualifies as a "positive pressure" greater than ambient pressure as defined in applicant's response (Sep 25, 2002). One of ordinary skill in the art would have been able to determine overpressure values as recited in the dependent claims in order to accomplish the improved collapsing technique of Irven et al.

Claim 6 is rejected under 35 U.S.C. 103(a) as being unpatentable over Matsummura et al (4,426,129) or Irven et al (4,165,224) as applied to claims 1-5 and 7-12 above, and further in view of Fanucci et al (4,465,707). Fanucci et al disclose a related process where argon and/or helium gas is employed during vapor deposition production of performs employing GeCl_4 (See Col. 3, lines 39-51). It would have been obvious to additionally use He or Argon with the instant for the art intended purpose.

It does not appear that applicant has presented additional arguments in regard to this rejection.

Claims 13-14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Matsummura et al (4,426,129) or Irven et al (4,165,224) as applied to claims 1-5 and 7-12 above, and further in view of Campion et al (6,201,917). Campion et al disclose a related process and teach that in general fiber-drawing tension lies in the range of 10 to 250 g and preferably in the range 30 to 150 g (sentence bridging Cols. 6 and 7). It

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would have been obvious to use a drawing tension of 150 g with the instant process since this tension is generally used by the prior art.

It does not appear that applicant has presented additional arguments in regard to this rejection.

Claims 15-16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Matsummura et al (4,426,129) or Irven et al (4,165,224) as applied to claims 1-5 and 7-12 above, and further in view of Ohga et al (5,763,081).

Ohga et al (5,763,081) disclose that fibers can be drawn from GeO_2 and SiO_2 at temperatures of about 2100°C (example 2) or 2000°C (See Col. 10, line 13). It would have been obvious to use these temperatures for drawing the instant fibers for the art disclosed purposes.

It does not appear that applicant has presented additional arguments in regard to this rejection.

Claims 17-24 are rejected under 35 U.S.C. 103(a) as being unpatentable over Matsummura et al (4,426,129) or Irven et al (4,165,224) as applied to claims 1-5 and 7-12 above, and further in view of Atkins et al (5,745,615).

Atkins et al disclose a process of exposing a Ge doped silica fiber to UV for the production of gratings (See Abstract, Title and Col. 2, lines 57-58). The exposure times of claims 18-21 fall within the teachings of Atkins et al (Fig. 1). The process produces useful Bragg gratings, long period gratings and gratings serving to stabilize the output of lasers (See Col. 6, lines 32-35 and Col. 5, lines 33-34). It would have been obvious for one of ordinary skill in the art to use the procedures of Atkins et al with the optical fibers

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produced by Matsumura et al or Irven et al for the purpose of producing useful gratings as disclosed by Atkins et al.

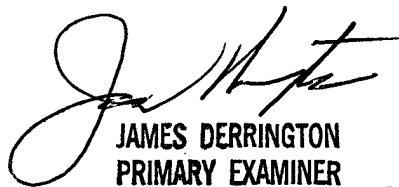
It does not appear that applicant has presented additional arguments in regard to this rejection.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to James Derrington whose telephone number is 703 308-3832. The examiner can normally be reached on 8:30am - 5pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Steven Griffin can be reached on 703 308-1164. The fax phone numbers for the organization where this application or proceeding is assigned are 703 305-7718 for regular communications and 703 872-9311 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703 308 0661.

jd
November 22, 2002


JAMES DERRINGTON
PRIMARY EXAMINER
ART UNIT ~~137~~ 1731